BLOOM: A 176B-Parameter Open-Access Multilingual Language Model

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Abstract

Large language models (LLMs) have been shown to be able to perform new tasks based on a few demonstrations or natural language instructions. While these capabilities have led to widespread adoption, most LLMs are developed by resource-rich organizations and are frequently kept from the public. As a step towards democratizing this powerful technology, we present BLOOM, a 176B-parameter open-access language model designed and built thanks to a collaboration of hundreds of researchers. BLOOM is a decoder-only Transformer language model that was trained on the ROOTS corpus, a dataset comprising hundreds of sources in 46 natural and 13 programming languages (59 in total). We find that BLOOM achieves competitive performance on a wide variety of benchmarks, with stronger results after undergoing multitask prompted finetuning. To facilitate future research and applications using LLMs, we publicly release our models and code under the Responsible AI License.